

# Comparisons of Job Characteristics

**Focus Occupation:** Welders, Cutters, Solderers, and Brazers (51-4121)

**Associated Occupation:** Plumbers, Pipefitters, and Steamfitters (47-2152)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

|    |  |
|----|--|
| << | Focus occupation element is much lower             |
| <  | Focus occupation element is lower                  |
| 0  | Focus occupation element is at a similar level     |
| >  | Focus occupation element is at a higher level      |
| >> | Focus occupation element is at a much higher level |

## Knowledge

Similarity of Focus Occupation to Associated Occupation: 81

**Focus Occupation:** Welders, Cutters, Solderers, and Brazers (51-4121)  
**Associated Occupation:** Plumbers, Pipefitters, and Steamfitters (47-2152)

| Associated Occupation's Key Knowledge Elements | Average Rating, All Occupations | Associated Occupation's Rating | Focus Occupation's Rating |    | Evaluation of Focus Occupation                      |
|--|---------------------------------|--------------------------------|---------------------------|----|---|
| Mechanical                                     | 6.8                             | 17.0                           | 9.5                       | << | Extensive education and/or training may be required |
| Building and Construction                      | 4.0                             | 16.6                           | 4.9                       | << | Extensive education and/or training may be required |
| Design   | 5.2                             | 11.2                           | 6.0                       | << | Extensive education and/or training may be required |
| Mathematics                                    | 9.2                             | 11.0                           | 6.4                       | << | Extensive education and/or training may be required |
| Physics  | 4.3                             | 9.6                            | 2.6                       | << | Extensive education and/or training may be required |
| Engineering and Technology                     | 5.7                             | 9.1                            | 6.4                       | << | Extensive education and/or training may be required |

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Skills

Similarity of Focus Occupation to Associated Occupation: 86

**Focus Occupation:** Welders, Cutters, Solderers, and Brazers (51-4121)  
**Associated Occupation:** Plumbers, Pipefitters, and Steamfitters (47-2152)

| Associated Occupation's Key Skills Elements | Average Rating, All Occupations | Associated Occupation's Rating | Focus Occupation's Rating |    | Evaluation of Focus Occupation                               |
|---|---------------------------------|--------------------------------|---------------------------|----|--|
| Operation and Control                       | 5.4                             | 8.7                            | 5.9                       | << | Extensive development of skills in this area may be required |
| Quality Control Analysis                    | 5.9                             | 8.7                            | 7.4                       | <  | A higher skill level may be required                         |
| Repairing                                   | 3.4                             | 8.4                            | 5.9                       | << | Extensive development of skills in this area may be required |
| Troubleshooting                             | 4.5                             | 8.4                            | 6.2                       | << | Extensive development of skills in this area may be required |

|                       |     |     |     |    |  |
|-----------------------|-----|-----|-----|----|--|
| Equipment Maintenance | 3.5 | 7.5 | 5.9 | <  | A higher skill level may be required                         |
| Equipment Selection   | 3.3 | 6.0 | 5.4 | <  | A higher skill level may be required                         |
| Installation          | 1.7 | 5.5 | 1.6 | << | Extensive development of skills in this area may be required |

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

| Abilities  |                                 | Similarity of Focus Occupation to Associated Occupation: 89 |                           |                                |  |
|--|---------------------------------|---|---------------------------|--------------------------------|--|
| Focus Occupation: Welders, Cutters, Solderers, and Brazers (51-4121)<br>Associated Occupation: Plumbers, Pipefitters, and Steamfitters (47-2152) |                                 |   |                           |                                |  |
| Associated Occupation's Key Abilities Elements   | Average Rating, All Occupations | Associated Occupation's Rating                              | Focus Occupation's Rating | Evaluation of Focus Occupation |  |
| Arm-Hand Steadiness  | 6.8                             | 11.8  | 11.4                      | 0                              | Current ability level may be sufficient            |
| Extent Flexibility   | 4.8                             | 11.5  | 5.2                       | <<                             | Extensive improvement in abilities may be required |
| Visualization  | 7.5                             | 11.2  | 8.6                       | <<                             | Extensive improvement in abilities may be required |
| Finger Dexterity   | 7.6                             | 11.1  | 9.7                       | <                              | Some improvement in abilities may be required      |
| Multilimb Coordination   | 6.0                             | 11.1  | 7.4                       | <<                             | Extensive improvement in abilities may be required |
| Gross Body Equilibrium   | 3.2                             | 8.0   | 3.2                       | <<                             | Extensive improvement in abilities may be required |
| Gross Body Coordination  | 3.9                             | 7.4   | 4.0                       | <<                             | Extensive improvement in abilities may be required |
| Speed of Limb Movement   | 3.2                             | 6.3   | 3.4                       | <<                             | Extensive improvement in abilities may be required |
| Spatial Orientation  | 2.7                             | 5.8   | 2.2                       | <<                             | Extensive improvement in abilities may be required |

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

| Activities that Both Occupations Have in Common  |                         | Similarity of Focus Occupation to Associated Occupation: 78 |
|--|-------------------------|---|
| <b>Focus Occupation: Welders, Cutters, Solderers, and Brazers (51-4121)</b><br><b>Associated Occupation: Plumbers, Pipefitters, and Steamfitters (47-2152)</b> |                         |   |
| Work Activities  | Exclusivity of Activity |   |
| Braze metal parts or components together   | 85                      |   |
| Compute production, construction, or installation specifications   | 58                      |   |
| Examine products or work to verify conformance to specifications   | 15                      |   |
| Fabricate, assemble, or disassemble manufactured products by hand  | 11                      |   |
| Identify base metals for welding   | 68                      |   |
| Maintain records, reports, or files  | 5                       |   |
| Move or fit heavy objects  | 8                       |   |

|  |    |
|--|----|
| Plan or organize work                                | 51 |
| Read blueprints                                      | 10 |
| Read specifications                                  | 23 |
| Read technical drawings                              | 7  |
| Solder metal parts or components together            | 73 |
| Use acetylene welding/cutting torch                  | 54 |
| Use arc welding equipment                            | 62 |
| Use braze-welding equipment                          | 92 |
| Use combination welding procedures                   | 68 |
| Use hand or power tools                              | 2  |
| Use soldering equipment                              | 44 |
| Weld together metal parts, components, or structures | 54 |

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Tools and Technologies that Both Occupations Have in Common

Similarity of Focus  
Occupation to Associated  
Occupation: 80

**Focus Occupation: Welders, Cutters, Solderers, and Brazers (51-4121)**  
**Associated Occupation: Plumbers, Pipefitters, and Steamfitters (47-2152)**

| Tools and Technologies                                  | Exclusivity |
|---|-------------|
| Aerial lifts  | 13          |
| Bandsaws and accessories                                | 26          |
| Business function specific software                     | 1           |
| Cleaning equipment                                      | 11          |
| Computer printers                                       | 2           |
| Computers   | 1           |
| Content authoring and editing software                  | 1           |
| Cutting and crimping and punching tools                 | 3           |
| Cutting tools   | 18          |
| Data management and query software                      | 1           |
| Electrical measuring and testing equipment              | 7           |
| Face and head protection                                | 7           |
| Forming tools   | 2           |
| Holding and clamping tools                              | 3           |
| Indicating and recording instruments                    | 2           |
| Industry specific software                              | 1           |
| Ladders and scaffolding                                 | 6           |
| Length and thickness and distance measuring instruments | 2           |
| Lifting equipment and accessories                       | 3           |
| Machine tools   | 7           |
| Marking tools   | 11          |
| Measuring and layout tools                              | 3           |
| Metal bending and forming machinery                     | 17          |
| Passenger motor vehicles                                | 13          |

|  |    |
|--|----|
| Personal communication devices                           | 2  |
| Pneumatic tools  | 8  |
| Power tools  | 2  |
| Prying and bending tools                                 | 10 |
| Rough and finishing tools                                | 5  |
| Soldering and brazing and welding machinery and supplies | 6  |
| Temperature and heat measuring instruments               | 6  |
| Tool attachments and accessories                         | 12 |
| Wrenches and drivers                                     | 2  |

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.